



Customer # 22500

*W/KD*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: SUNDARAM, et al.  
Serial No. 10/781,523  
Filed: 18-Feb-2004 Atty. Dkt. No: 20030128  
For: QWIP With Enhanced Optical Coupling

CERTIFICATE OF MAILING 37 CFR 1.8: I certify that this correspondence is being deposited on the below date with the U.S. Postal Service with sufficient postage as FIRST CLASS MAIL addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

Date: 3/27/06 Signed: Gloria Abbasciano  
Gloria Abbasciano

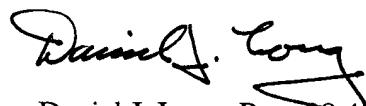
Dear Honorable Commissioner:

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

Transmitted herewith is the Applicant's Information Disclosure Statement, 1 sheets form 1449, and 4 specimens of prior art and other information. Please enter in the above applications and communicate in all related matters with the undersigned.

DEPOSIT ACCOUNT **190130** AUTHORIZATION – All necessary fees are intended to be included, however the Office is hereby authorized to charge any deficiency or credit any overpayment in the fees to this deposit account.

Respectfully submitted,

  
Daniel J. Long, Reg. 29,404

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant of: SUNDARAM, et al. Group Art Unit: 2878  
Serial No.: 10/781,523 Examiner:  
Filed: 18-Feb-2004 Atty. Dkt. No: 20030128  
For: QWIP With Enhanced Optical Coupling

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Date: 3/27/06

*Gloria Abbasciano*

Gloria Abbasciano

Dear Assistant Commissioner:

### INFORMATION DISCLOSURE STATEMENT

Applicants submit this statement in accordance to the duty of disclosure under 37 C.F.R. §§1.56, 1.97, and 1.98, and requests consideration of this Information Disclosure Statement.

Compliance with 37 C.F.R. §1.97: This Information Disclosure Statement is filed within three (3) months of the filing date of a National Application or before the mailing date of a first office action on the merits. No fee or certification is required.

Information Cited: The Applicants hereby make of record in the above-identified application, the information listed on the attached form PTO-1449. The order of presentation of the references should not be construed as an indication of the importance of the reference. As all the references listed on attached Form PTO-1449 are in English, no commentary is required.

Remarks: Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003. Applicants respectfully request that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application; and
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

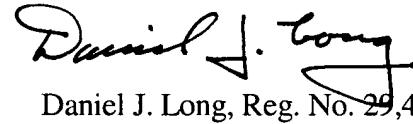
By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined in 37 C.F.R. §102.

Notwithstanding any statement by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Please enter in the above application and communicate in all related matters with the undersigned. All necessary fees are intended to be included, however the Office is hereby authorized to charge any deficiency or credit any overpayment in the fees to deposit account #190130.

Respectfully submitted,



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Form PTO-1449				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <small>MAR 29 2006</small>				Application Number	10/781,523
				Filing Date	18-Feb-2004
				First Named Inventor	Sundaram, Mani
				Group Art Unit	2878
				Examiner Name	
Sheet 1 of 1				Attorney Docket Number	20030128

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	U.S. Patent Document Number Code	Kind	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		US 2002/0167984		Scherer, Axel	11-14-2002

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Office Number Code	Kind	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner Initials	Cite No.	(Including Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc...), date, page(s), volume-issue number(s), publisher, city, and/or country where published.)				
		PCT International Search Report dated 31-Jan-2006 of International Application No. PCT/US05/03321 filed 03-Feb-2005:				
		BANDARA et al, "Tridirectional Gratings as Improved Couplers for QWIPs", Vol. NPO-20703, NASA Tech. Briefs issue, May 2000, pages 1-3.				
		GUNAPALA et al, "Metal Side Reflectors for Trapping Light in QWIPs", Vol. NPO-30507, NASA Tech Briefs Issue, June 2003, pages 1-2.				
		TEMELKURAN et al, "Photonic-crystal-based resonant-cavity-enhanced detectors", IQEC'98, 03 May 1998 (03.05.1998), pages 80-81.				
		KRAUSS et al, "Fabrication of 2-D photonic bandgap structures in GaAs/AlGaAs", Electronics Letters, Vol. 30, No. 17, 18 August 1994 (18.08.1994), pages 1444-1445.				

Examiner Signature		Date Considered
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\* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.